

REMARKS

Claims 1-11, 13-19 and 21-24 are pending. Claims 11, 19 and 23-24 have been amended. Claims 12 and 20 have been canceled. In view of the following, all pending claims are in condition for allowance. If, after considering this response, the Examiner does not agree that all of the claims are allowable, then the Examiner is requested to schedule a teleconference with the Applicants' attorney to further the prosecution of the application.

Rejection of claims 11, 13, 19 and 23-24 under 35 U.S.C. 102(b) as being anticipated by Oishi et al. (US 6,317,476)

Claim 11

Claim 11 has been amended to include the limitations of allowable claim 12. As indicated by the Examiner, claim 11 is now in condition for allowance.

Claim 13

Claim 13 is patentable by virtue of its dependency from claim 11.

Claim 19

Claim 19 is a method version of claim 11. Claim 19, as amended, is patentable for reasons similar to those recited above in support of the patentability of claim 11.

Claims 23-24

Claims 23-24, as amended, are patentable for reasons similar to those recited above in support of the patentability of claim 11.

**Rejection of claims 1-3 and 10 under 35 U.S.C. 103(a) as being unpatentable over
Oishi in view of Park (US 6,219,397)**

Claim 1

Claim 1 recites means for generating a modulation value, a dividing ratio being modulated according to the modulation value, and means for calculating an incremental value according to the conversion factor and the modulation value.

For example, referring, e.g., to FIGS. 1a and 2 of the present application, a phase-locked loop (PLL) 100 includes means 110 for generating a modulation value $x[n]$. The PLL 100 (through control logic 125) estimates the phase error (represented by the correction value N_c) by calculating an incremental value corresponding to an incremental phase error. This incremental value is calculated from the conversion factor (i.e., the adjusting value K and its modulus M) and the modulation value $x[n]$. The correction value N_c is then converted (through DAC 130) into the correction current I_c for conditioning the charge-pump current I_p . It should be noted that the incremental value is calculated according to the modulation value $x[n]$, and the dividing ratio of the multi-modulus divider 105 is modulated by the modulator 110.

Oishi, on the other hand, does not teach means for generating a modulation value, a dividing ratio being modulated according to the modulation value, and means for calculating an incremental value according to the conversion factor and the modulation value. Instead, FIG. 2 of Oishi simply teaches the same type of PLL that is discussed in the Background section of the present application. The Examiner correctly concedes on page 4 of the office action that Oishi fails to teach a PLL that utilizes a modulator.

Similarly, Park does not teach means for generating a modulation value, a dividing ratio being modulated according to the modulation value, and means for calculating an incremental value according to the conversion factor and the modulation value. Instead, Park teaches a frequency synthesizer 100 having a modulator 170 with a single output signal SC (FIG. 1; col. 4, lines 19-44). This output signal SC from the modulator 170 is only provided to a multi-modulus divider 160. There is no other output from the modulator 170 that provides a modulation value that is used with a conversion

factor to calculate an incremental value. In fact, after reviewing Park in its entirety, the Applicants' attorney is unable to find any mention of a modulation value output from the modulator 170 that is used to calculate an incremental value (in addition to being used to modulating a dividing ratio).

Therefore, not only is there no motivation to combine the teachings of Oishi and Park, but such a combination would not even satisfy every limitation of claim 1.

Claims 2-3

Claims 2-3 are patentable by virtue of their dependencies from claim 1.

Claim 10

Claim 10 is a method version of claim 1. Claim 10 is patentable for reasons similar to those recited above in support of the patentability of claim 1.

Rejection of claim 16 under 35 U.S.C. 103(a) as being unpatentable over Oishi

Claim 16 is patentable by virtue of its dependency from claim 11.

CONCLUSION

In light of the foregoing, claims 1-11, 13-19 and 21-24 are in condition for allowance, which is respectfully requested.

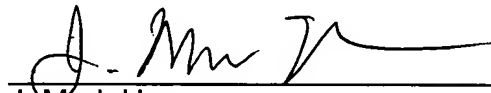
Applicant submits that this response has not generated any additional claim fees. However, if the Examiner determines that additional fees are necessary, he is authorized to charge them to deposit account number 07-1897.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner schedule a phone interview with the Applicants' attorney at (425) 455-5575.

Dated this 22nd day of May, 2008.

Respectfully submitted,

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